United States Senate
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
WASHINGTON, DC 20510–6175

April 17, 2019

Mr. David Ross
Assistant Administrator
Environment Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Dear Mr. Ross:

On behalf of the Senate Committee on Environment and Public Works, we would like to thank you for testifying before the Committee on Wednesday, March 28, 2019, at the hearing entitled, "*Examining the federal response to the risks associated with per- and polyfluoroalkyl substances (PFAS).*" The Committee greatly appreciates your attendance and participation in this hearing.

In order to maximize the opportunity for communication between you and the Committee, follow-up questions have been submitted by the members. To comply with Committee rules, please e-mail a copy of your responses to QFR@epw.senate.gov or deliver one hard copy by COB Wednesday, May 1, 2019. Responses should be delivered to the EPW Committee at 410 Dirksen Senate Office Building, Washington, DC 20510.

If you have any questions about the requests or the hearing, please feel free to contact Staff Director, Richard Russell in the Majority Office at (202) 224-6176 or Staff Director, Mary Frances Repko in the Minority Office at (202) 224-8832.

Sincerely,

John Barrasso, M.D.
Chairman

Tom Carper
Ranking Member

Senate Committee on Environment and Public Works
Hearing entitled, *"Examining the federal response to the risks associated with per- and polyfluoroalkyl substances (PFAS)"*
March 28, 2019
Questions for the Record for Mr. Ross

Chairman Barrasso:

1. When does EPA intend to issue a proposed rule for designating PFOA and PFOS as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act?

2. When does EPA intend to release its interim groundwater cleanup recommendations for PFOA and PFOS?

3. Is EPA aware of any informal or formal estimates of the costs to clean up all sites, where the Department of Defense (DOD) or other federal agencies have contaminated groundwater with PFOS and/or PFOA at levels above 70 parts per trillion (ppt), to a level of 70 ppt? If so, please provide those informal or formal cost estimates.

4. Is EPA aware of any informal or formal estimates of the costs to clean up all sites, where DOD or other federal agencies contaminated groundwater with PFOS and/or PFOA at levels above 380 ppt, to a level of 70 ppt? If so, please provide those informal or formal cost estimates.

5. Please provide the following:

    a. The legal citations to all the final Significant New Use Rules (SNURs) that address PFAS chemicals.
    b. List all the PFAS chemicals (including acronyms and Chemical Abstracts Service Registry Numbers (CASRNs)) that are subject to these SNURs.
    c. List all the PFAS chemicals (including acronyms and CASRNs) that have entered the market under one of the exemptions to full pre-manufacture notice review under section 5 of the Toxic Substances Control Act (TSCA).
    d. List all the PFAS chemicals (including acronyms and CASRNs) that are *either* subject to final SNURs *or* have entered the market under one of the exemptions to full pre-manufacture notice review *and* are now considered "commercially active" on the TSCA Inventory.

6. EPA has published a validated monitoring methodology for detecting 18 PFAS chemicals in drinking water. In 2019, EPA is expected to publish validated monitoring methodologies for detecting 24 PFAS in media other than drinking water. Over 600 PFAS are considered "commercially active" on the TSCA Inventory.

    a. Why has EPA decided to focus on these specific PFAS chemicals?

b. What are EPA's plans to publish validated monitoring methodologies for other PFAS chemicals in drinking water and media other than drinking water?

7. You testified that EPA has "a holistic action plan" to address PFAS. You went on to say that: "I worry about the lifecycle of these chemicals. You take them out of water supply. Are we just transferring the media to which we have a problem?" Please describe EPA's plans to provide guidance on the disposal of PFAS, including the disposal of products with PFAS (including but not limited to aqueous film forming foam) and water filtration systems (including but not limited to granular activated carbon) that collect PFAS.

8. EPA is in the process of conducting toxicity assessments for five PFAS chemicals through its Integrated Risk Information System. Separately, EPA released draft assessments for PFAS chemicals, known as GenX and PFBS, in 2018.

    a. Why did EPA focus on these specific nine PFAS?
    b. Does EPA plan to conduct toxicity assessments on other PFAS chemicals? If so, please list which PFAS chemicals (including acronyms and CASRNs).

9. Please list which PFAS chemicals (including acronyms and CASRNs) EPA intends to propose including in Unregulated Contaminants Monitoring Rule 5.

10. What do you need from chemical manufacturers and processors or others in the private sector to better understand and respond to the risks associated with PFAS chemicals?

11. Are there lessons or best practices that we can learn from other countries, which are also addressing the risks to public health and the environment associated with PFAS? If so, what are these lessons or best practices?

12. What steps can the Executive Branch take to improve coordination among federal agencies as it responds to the risks associated with PFAS chemicals?

13. What steps can the Executive Branch take to improve communication with states, tribes, local communities, and the public about the risks associated with PFAS chemicals?

Ranking Member Carper:

Questions about the PFAS Action Plan

14. Please provide the following:

    a. Copies of all documents exchanged between EPA and DOD regarding the PFAS Action Plan or the groundwater cleanup guidelines for PFOS and PFOA.
    b. Copies of all documents exchanged between EPA and OMB regarding the PFAS Action Plan or the groundwater cleanup guidelines for PFOS and PFOA.
    c. Copies of all documents exchanged between EPA and HHS regarding the PFAS Action Plan or the groundwater cleanup guidelines for PFOS and PFOA.

d. Copies of all documents exchanged between EPA and NASA regarding the PFAS Action Plan or the groundwater cleanup guidelines for PFOS and PFOA.

For purposes of this request, "documents" includes, but is not limited to, comments, notes, emails, legal and other memoranda, white papers, scientific references, letters, telephone logs, text messages, meeting minutes and calendars, photographs, slides and presentations. In the case of meetings, calls, or other oral communications, please include the date, time, and location at which such communications took place, a list of the individuals who participated, as well as a description of the communication.

15. At the press conference announcing the PFAS Action Plan, Administrator Wheeler described eight instances in which EPA issued enforcement orders or assisted with state enforcement actions. Please provide details of each such instance (and any subsequent actions), including the name of the cases and defendants, the jurisdictions/states where enforcement occurred, and any notices of violation issued.

16. The PFAS Action Plan describes research efforts designed to inform EPA's future regulatory efforts related to PFAS. How will EPA use non-targeted analysis to identify any and all PFAS in the environment to inform its decisions for the regulation of PFAS, for example by requiring listing of specific PFAS on the Toxics Release Inventory? If EPA has no such plans why not, since history has shown that the presence of one type of PFAS often means that others are also present at an environmental site?

17. The PFAS Action Plan describes EPA's efforts to use computational methods utilized in EPA's CompTox program "to explore different chemical categories of PFAS, to inform hazard effects characterization, and to promote prioritization of chemicals for further testing." How does EPA plan to integrate the results of this work into its regulatory efforts, for example, by ensuring that the information is considered when EPA is reviewing pre-manufacturing notices for new PFAS or using the results to inform its regulatory efforts for existing PFAS?

18. The PFAS Action Plan stated that EPA plans to "finalize draft toxicity assessments for GenX chemicals and PFBS; develop additional PFAS toxicity values for PFBA, PFHxA, PFHxS, PFNA, and PFDA." How can approaches such as evidence mapping be used to identify other PFAS substances that might be good candidates for toxicity evaluations? How does EPA plan to use these toxicity values to inform decisions on tracking or regulating these PFAS?

Questions about PFAS-contaminated sludge

Recently, press reports described situations in New Mexico and Maine in which PFAS-contaminated sludge that had been used as fertilizer devastated dairies whose milk had become highly contaminated as well.

19. Is EPA aware of the degree to which PFAS-contaminated sludge has historically been spread in the United States? If so, please provide specific information that includes the

estimated amount of PFAS that has been spread in sludge for each year for which EPA has such information (including the amount of sludge that was spread on each type of cropland, dairy farm, other land type, etc.). For farmland sites (including dairy farms) where sludge was spread in the United States, what is the name and location of each site, and what agricultural products are produced there? If EPA does not possess any of this information, please specifically describe the steps EPA plans to take to assess and quantify the extent and location of PFAS sludge-spreading activities.

20. For each year since the passage of the Clean Water Act of 1972, please provide a list that includes the name, location, and type (i.e. publicly owned treatment works, pulp and paper industry, etc.) of sludge generators that operated in the United States. Please also indicate which sludge generator required treatment of wastewater prior to discharge.

21. Is EPA aware of the fate of sludge after it is generated, by amount, type of disposal (landfilling, incineration, land spreading, composting, etc.) and source of sludge (i.e. pulp and paper mills, other source category)? If so, please provide a specific description and quantification thereof. If not, please specifically describe the steps EPA plans to obtain such information.

22. For sludge that was composted, is EPA aware of the ultimate fate of such sludge (e.g. applied to farm land, applied to municipal land, provided to general public, etc.)? If so, please provide a specific description and quantification of any amounts thereof. If not, please specifically describe the steps EPA plans to take to obtain such information.

23. Please provide a list of all sites of PFAS-contamination that are suspected to have been contaminated in whole or in part by sludge-spreading activities, including the site name and location, source of the sludge, environmental media affected (soils, ground water, drinking water, cow's milk, crops (specify), manure, etc.), and highest concentration of each individual PFAS compound measured in each medium, and known or suspected source of PFAS in the sludge (by name or category).

24. Please provide a list that includes any established federal or state standards or screening levels for beneficial reuse that have been established to limit the acceptable amount of PFAS in sewage sludge, for which specific PFAS compounds (or total PFAS) do they apply, and to which geographic locations the standards or levels apply.

25. The PFAS Action Plan states that "The EPA is in the early scoping stages of risk assessment for PFOA and PFOS in biosolids to better understand the implications of PFOA and PFOS in biosolids to determine if there are any potential risks." Please provide as much specificity on EPA's plans to conduct this risk assessment as possible, including the timeline for its completion.

26. The PFAS Action Plan states that EPA will "Provide additional methods for stakeholders and the EPA to identify the presence of PFAS in concentrations of concern for media other than drinking water" and cites biosolids as one such type of media for which

methods will be developed. Please provide as much specificity on the development of these methods as possible, including the timeline for their completion.

Questions about PFAS and TSCA

27. The PFAS Action Plan says that EPA will finalize a Significant New Use Rule (SNUR) under TSCA, first proposed in 2015, for new uses of some PFAS. When will this rule be finalized?

28. For each year since 2007, please list each new PFAS for which there was both a pre-manufacturing notice (PMN) and notice of commencement (NOC) received by EPA. Please provide, for each such chemical, the CAS number, date received, case number, amendment number and version, manufacturer, and commencement date (as applicable, and excluding CBI), and whether the substance was subject to a consent order.

29. There are a number of PFAS that have been subject to SNURs in 2002 and 2007 that remain on the TSCA Inventory. Is EPA aware of which of these PFAS substances remained in active commerce later than 2016? If so, please provide a list. If not, what is EPA doing to determine the answer to this question, since many of the PFAS subject to these SNURs were 8-carbon PFAS related to voluntary and enforcement actions taken to phase out PFAS of concern?

Questions about PFAS and Superfund

30. Has EPA tested all Superfund sites for the presence of PFAS? If so, please provide a list of Superfund sites at which PFAS has been found, along with the name of the PFAS chemical identified and the levels measured. If not, when does EPA plan to undertake such testing? If so, how long will PFAS be monitored for at those sites?

Questions about PFAS and Water

31. Does EPA have monitoring results for PFAS detections in drinking water systems below the minimum reporting level in UCMR 3? If so, please provide that data. If not, please explain why not, since it is my understanding that measurements were conducted down to the detection limit of the methodologies used.

32. Is it possible to develop a validated total PFAS or total organic fluorine methodology to detect and monitor PFAS in drinking water and ground water? If so, please describe the steps required to complete the development and/or validation of such a methodology, along with expected timelines for their completion. If such a methodology was completed, how could it best be used to advance EPA's PFAS research, monitoring and regulatory efforts? Could you describe any statutory barriers that could hinder or prevent the utilization of such a methodology to support the development or implementation of regulations under each of the Safe Drinking Water, Clean Water, Emergency Planning and Community Right-to-Know, Toxic Substances Control, Clean Air or Comprehensive Environmental Response, Compensation and Liability Acts? (As non-exhaustive

examples, could you describe any potential implementation challenges of i) promulgating a total PFAS drinking water standard, ii) adding all active PFAS chemicals to the Toxic Release Inventory, or iii) designating all PFAS as hazardous substances)?

33. Many entities have recommended that all PFAS be regulated as a class, instead of via a chemical-by-chemical approach. Could you describe all efforts by EPA to research, monitor and regulate PFAS as a class (including sub-classes consisting of some but not all PFAS substances) as well as any statutory, scientific or other barriers to doing so?

34. Once EPA finalizes toxicity values for each PFAS or class of PFAS, does it plan to develop drinking water health advisories for each one? If not, why not, since a toxicity value in isolation will not provide a community with information that can be easily used to identify a safe level for that PFAS or class of PFAS in drinking water or groundwater.

Senator Capito:

35. Can you elaborate on how the ATSDR's Toxicological Profile factors into the EPA's regulatory processes, especially as concerns determining a potential MCL? Does the ATSDR Toxicological Profile require or directly translate into environmental standards to be set by the EPA?

36. What is a realistic regulatory timeline for a determination on a potential MCL for a particular PFAS compound or class of PFAS?

37. Can there be regulatory flexibilities under a potential MCL or other regulatory action to reduce the frequency and cost of sampling?

    a. Could the EPA's approach to regulating asbestos or VOCs in drinking water serve as a model for a flexible approach here?

38. Does EPA intend to add any PFAS or classes of PFAS to UMCR 5? If so, which?

39. Will the agency conduct any sampling before UMCR 5?

40. Under TSCA, what is EPA doing regarding SNURs for existing PFAS chemicals in the marketplace?

41. How many PFAS are currently used in commerce?

42. During the hearing, you mentioned that the EPA Office of Air is currently working on PFAS air standards and monitoring techniques.

    a. Can EPA elaborate on that work for the record and provide a timeline for finalization of standards or monitoring techniques?

b. While these standards and monitoring techniques are being developed, how has the EPA certified or monitored existing facilities that are already being employed to destroy, via combustion, Department of Defense stockpiles of FFFO?
    i. How confident is the EPA that this mitigation of the Department of Defense's legacy PFAS material is not simply shifting this pollution to a different medium, namely air?

Senator Cramer:

43. Mr. Ross, both you and Administrator Wheeler have stated that you intend to move forward with a rulemaking process to set an enforceable maximum contaminant levels (MCLs) for PFAS under the Safe Drinking Water Act. According to your website, there are three criteria that must be met in order to set a national MCL under the Safe Drinking Water Act. One of them is: "The contaminant is known to occur or there is a high chance that the contaminant will occur in public water systems often enough and at levels of public health concern." What metrics do you use to determine the prevalence or "high chance" of a substance in public waters systems nationally?

44. The publicly available maps shows high concentrations of PFAS in certain regions while certain areas have very little, if any. There is concern that we create a national regulatory burden for everyone rather than proactively targeting the communities most in need. As you work through the rulemaking process, are there tools you can use to try and address this in a more targeted, regional fashion rather than a national mandate which will require water providers everywhere to do testing?

Senator Gillibrand:

45. Mr. Ross, the public has a right to know when PFAS are present in their drinking water or groundwater, as well as when these chemicals are released into the air. Does the EPA currently require monitoring or reporting for releases of PFAS into air and water?

    a. Why has EPA not used its existing authority under the Toxic Release Inventory to require polluters to report releases of PFAS to the public?

46. Is EPA still approving new PFAS chemicals for commercial use under the Toxic Substances Control Act?

    a. If yes, how many new PFAS chemicals have been approved under the current Administration?

47. You have indicated that the EPA intends to issue a regulatory determination on whether to regulate PFAS under the Safe Drinking Water Act by the end of the year. Once your regulatory determination has been made, how long does EPA intend to take to set an enforceable Maximum Contaminant Level for PFAS in drinking water?

Senator Inhofe:

48. There are claims that the Environmental Protection Agency's (EPA) health advisory is too low given the Agency for Toxic Substances and Disease Registry's (ATSDR) minimum risk level. It is my understanding that the EPA's health advisory and the ATSDR's level are answers to different questions.

    a. Is this accurate?
    b. If so, what are those differences?

49. The ATSDR report from last summer states, "The available human studies have identified some potential targets of toxicity; however, cause and effect relationships have not been established for any of the effects, and the effects have not been consistently found in all studies." To be clear, does this mean that the report did not establish "causation" relative to various health outcomes that were being cited?

50. Given the various recent studies of PFAS chemicals that have taken place, including one clinical trial of PFOA doses administered to humans leading to average blood levels of 175,000 parts per *billion*, is EPA tracking the studies?

    a. If so, what role will they serve in informing the various regulatory actions the agency will be taking in the coming months?
    b. How will EPA determine which are most "informative" for the purpose of regulatory decisions?

51. Data from the annual CDC NHANES survey and the Red Cross show that as of 2015, the average levels of PFOA and PFOS in the general U.S. population have declined 70-80 percent since 2000. Given this data, does EPA expect that these levels would continue to decline?

52. What is EPA's understanding of the means of exposure for PFAS chemicals for people overall?

    a. Is it primarily through drinking water?
    b. If so, what percent of exposure risk is likely via drinking water versus other means?

53. Other countries have been dealing with this issue as well and might be further along in their dealings with these chemicals.

    a. Is EPA looking at the international response?
    b. How does the EPA's health advisory level compare to other countries?

Senator Markey:

54. Out of the C8 PFAS chemicals on the Toxic Substances Control Act inventory, how many are still being actively used in commerce in 2019?

Senator Sanders:

55. Elevated and unsafe levels of perfluoroalkyl substances (PFAS) have been found in hundreds of sites and at least one municipal water system in Vermont, and have contaminated public water and other natural resources for an estimated 16 million people nationally. Despite this clear and serious health risk, the EPA has yet to make a final regulatory determination to regulate PFAS chemicals as a drinking water contaminant under the Safe Drinking Water Act. Please provide a timeline for a final regulatory determination to regulate PFAS chemicals as a drinking water contaminant under the Safe Drinking Water Act.

56. Will you commit to meeting the Safe Drinking Water Act statutory deadlines to set a maximum contaminant limit once the EPA has made the regulatory determination to regulate PFAS chemicals as a drinking water contaminant?

57. Several states, including my home state of Vermont, have set health advisories for drinking water containing PFAS chemicals that are significantly more stringent than the EPA's lifetime health advisory level. The most recent update to the Toxic Substances Control Act (TSCA) contained a provision that protects states that had more stringent standards on the books before April 22, 2016 (Sec. 13 State-Federal Relationship, 15 USC § 2617(e)(1)(A)). Will you commit to avoiding any actions that would preempt states' ability to enforce health advisory levels for PFAS enacted before April 22, 2016 that are more stringent than the EPA's standards? If you will not make this commitment, please describe the specific instances in which you believe TSCA would prevent states from enforcing more stringent requirements the state had established before April 22, 2016.

Senator Sullivan:

58. You and the Administrator have stated that you are working through your action plan to set an MCL for and list as hazardous substances under CERCLA some set of PFAS chemicals this year. If listed under CERCLA owners or operators of facilities where a release took place would be strictly liable for cleaning up the site and the costs. In Alaska aircrafts are vital for transportation, supplies, and general access to various communities. Current FAA regulations require certain airport operators to maintain Aircraft Rescue and Firefighting equipment and systems, including Aqueous Firefighting Foams (AFFF). These AFFFs must meet military specifications that include certain PFAS chemicals. Thus, airport operators have been required by federal law to use and discharge for

training PFAS. Many airports in my state are owned and operated by the State or local municipalities. If PFAS chemicals are listed as hazardous under CERCLA, will these State and local governments be liable for both the clean-up and the costs from discharges of chemicals that were mandated by federal law? Can you under existing law exclude these entities from liability if the costs threaten to bankrupt a city or other entity? Finally, would an exclusion from liability for a state or local government if the release that contaminated the site were mandated under federal law, still allow for clean-up of affected sites?

59. Are their accepted techniques to properly clean up and dispose of PFAS contaminated soil? For instance can contaminated soil be burned to remediate a site?

60. Are existing funding sources to help affected communities adequate given the growing scope of sites that have been discovered?

Senator Wicker:

61. Water utilities in rural and underserved communities may struggle to gather the resources necessary to filter PFAS out of their system. If EPA sets a maximum contaminant level (MCL) for certain PFAS chemicals, what will be the timeline for compliance for a noncompliant water utility? Additionally, how will EPA work with rural and underserved communities that have limited resources to ensure compliance?

62. Will EPA be re-opening closed Superfund sites to evaluate the area for PFAS contamination? Will existing Superfund sites be reevaluated for PFAS contamination?

63. Have there been any economic impact studies to determine at the State level how the regulation of PFAS will affect drinking water programs and cleanup programs?